

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
)
Shaun DENNIE) Group Art Unit: 2186
)
Serial No.: Continuation of Application Serial) Examiner: T. Thai
09/244,135, Filed February 4, 1999)
)
Filed: Herewith)
)
For: PROTOCOL FOR COORDINATING)
THE DISTRIBUTION OF SHARED)
MEMORY)
Commissioner for Patents and Trademarks
Washington, DC 20231

Sir:

PRELIMINARY AMENDMENT

Prior to the examination of the above application, please amend this application as follows:

IN THE CLAIMS:

Please cancel claim 1, and insert new claims 17-34 as follows:

17. (New) A method for allocating a memory by assigning blocks of a designated size in a data processing system, the method comprising:
- determining whether a request to secure access to a block of memory in the memory from an executing thread is permitted;
 - accessing a memory allocation table in the memory to determine an address for an available memory block;

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

20250104 14:50:07

designating the next available memory block for the executing thread in response to the request;

updating the memory allocation table to reflect the designation of the available memory block for the executing thread in response to the request; and

coordinating shared access for all executing threads to the memory, wherein at least one other executing thread requests and secures access to other blocks of the memory while the executing thread accesses the available memory block.

18. (New) The method of claim 17, wherein designating the available memory block for the executing thread in response to the request includes:

providing the address for an available memory block to the executing thread.

19. (New) The method of claim 17, wherein updating the memory allocation table to reflect the designation of the available memory block for the executing thread in response to the request includes:

identifying an address for a new available memory block.

20. (New) A computer-readable medium containing instructions for performing a method for allocating shared memory among threads of control in a data processing system, the method comprising:

determining whether a request to secure access to a block of memory in the shared memory from an executing thread is permitted;

20250710 14:05:07

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

accessing a memory allocation table in the shared memory to determine an address for an available memory block;

designating the available memory block for the executing thread in response to the request;

updating the memory allocation table to reflect the designation of the available memory block for the executing thread in response to the request; and

coordinating shared access for all executing threads to the memory, wherein at least one other executing thread requests and secures access to other blocks of the shared memory while the executing thread accesses the available memory block.

21. (New) The computer-readable medium of claim 20, wherein designating the available memory block for the executing thread in response to the request includes:

providing the address for an available memory block to the executing thread.

22. (New) The computer-readable medium of claim 20, wherein updating the memory allocation table to reflect the designation of the available memory block for the executing thread in response to the request includes:

identifying an address for a new available memory block.

23. (New) A system for assigning blocks of memory, the system comprising:
an area of a memory designated for coordinating the assignment of the memory to one or more threads requiring access to the memory, wherein the area including usage information reflecting usage of the memory; and

20250404 10:50:00

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

a processor for performing a protocol for serializing access to the memory by the one or more threads based on the usage information, wherein the protocol allows a first thread to access a first designated block of the memory while another thread requests and secures access to another block of the memory.

24. The system of claim 23, wherein the another thread secures access to the another block of memory based on a token obtained from the area of memory that was previously used by the thread to secure access to the designated block of memory.

25. The system of claim 23, wherein the size of the designated block of memory is determined by a user.

26. The system of claim 23, wherein the another designated block of memory is adjacent to the designated block of memory.

27. (New) A method for allocating blocks of a shared memory in a data processing system, the method comprising:

receiving a memory allocation request;

determining whether access to the shared memory is permitted for purposes of the memory allocation request;

identifying a next available memory block in the shared memory in response to the memory allocation request based on a determination that access to the shared memory is permitted for purposes of the memory allocation request; and

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

designating the next available memory block in response to the request,
wherein the receiving, determining, identifying and designating are performed without
accessing an operating system.

28. (New) A memory allocating system, comprising:

a shared memory; and

at least one processor configured to, without accessing an operating system, receive a
memory allocation request, determine whether access to the shared memory is permitted for
purposes of the memory allocation request, identify a next available memory block in response
to the memory allocation request based on a determination that access to the shared memory is
permitted for purposes of the memory allocation request and designate the next available
memory block in response to the request.

29. (New) A computer-readable medium containing computer-readable instructions
for performing a method on a data processing system for allocating blocks of a shared memory,
the method comprising:

receiving a memory allocation request;

determining whether access to the shared memory is permitted for purposes of the
memory allocation request;

identifying a next available memory block in response to the memory allocation request
based on a determination that access to the shared memory is permitted for purposes of the
memory allocation request; and

designating the next available memory block in response to the request,

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

wherein the receiving, determining, identifying and designating are performed without accessing an operating system.

30. A method, comprising:

allocating to a first process, without accessing an operating system, a first block of a memory that has a size designated by a user; and

allocating to a second process, without accessing an operating system, a second block of the memory that has a size designated by the user while the first process is accessing the first block of memory.

31. The method of claim 30, wherein the allocating of the first and second blocks of memory to the first and second processes, respectively, is based on a token obtained from a designated area of the memory.

32. The method of claim 31, wherein the first and second blocks of memory are consecutive blocks of memory.

33. The method of claim 31, wherein allocating the first block of memory comprises: incrementing a value that reflects a location in the memory corresponding to the first block of memory.

34. The method of claim 33, wherein allocating the second block of memory comprises:

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

determining the second block of memory based on the incremented value.

REMARKS

By this amendment, Applicant cancels claim 1 and adds new claims 17-34 for examination in this application.

If there is any fee due in connection with the filing of this Preliminary Amendment, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: January 18, 2002

By: 

Joseph E. Palys
Reg. No. 46,508

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com